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Submitted to the Committee on Commerce, Science, and Transportation Subcommittee on Science, Technology, and Space United States Senate

> Hearing on Cloning Washington, D.C. May 2, 2001

Mr. Chairman, members of the Subcommittee, I applaud your determination to legislate a prohibition on the cloning of human embryos. Cloning of human embryos is antithetical to root principles of a civilized society. A civilized nation protects the weakest, most dependent human beings, believing and enshrining into law equal protection principles premised on the truth that we are all created equal with an inviolable dignity in the "image and likeness of God", our Creator.

The issue of cloning a human embryo may seem to be scientifically and ethically perplexing, and there may be some who say that the role of government is to stand back and permit science to do anything it is capable of doing in the area of human health and reproduction. Thankfully, you correctly recognize the fundamental threat that human cloning poses to our civilized society, based on Judeo-Christian principles and the presumption of equality before the law. Cloning a human embryo involves a radical manipulation of our human nature. It is a grave deformation of the nature of human generation, transforming it into no more than animal breeding or the manufacture of some material device. If society loses the sense of the essential distinction of human life from

animal life and material things, whether in theory or in the practice of attempting to clone a human embryo, it has lost its stature as a human society. It has lost the compass of humanness and is, instead, laying the foundation for the replacement of a human living with biological chaos.

If human beings become manufactured goods, with manufacturers competing to create the smartest or healthiest or fastest human being, then the equality clause of the Declaration of Independence and the concept of "one person, one vote" lose their meaning.

When the issue of human cloning has surfaced over the past years, most often the focus is on what some call "reproductive cloning." Those who use the phrase generally mean implanting and bringing to birth a human being brought into existence initially as a one-celled embryo by the process of somatic cell nuclear transfer. At this time, there is almost unanimity in judging the wrong of even attempting "reproductive cloning" and a consensus on the need to prohibit legally anyone attempting it. Present divisions and violence within our society could be greatly magnified in civil strife between citizens if reproductive cloning were permitted. We would cease to be a democracy based on equal protection under the law. The temptation to play God in the creation of the "perfect human being" would set off the lowest competitive instincts not only among the scientific community but among would be parents of the "perfect child".

Reproductive cloning gets all the headlines, but there is another rationale being advanced for cloning -- cloning human embryos as a source of embryonic tissue for research and for medical treatment, which I know also concerns the Subcommittee and

which has also been appropriately addressed in the Brownback-Weldon bill. This socalled "therapeutic cloning" sounds benign, but it is as deadly as so-called "therapeutic abortion." The successful transfer of the nucleus of a somatic cell to a de-nucleated egg leading to a fusion of the somatic cell nucleus with the egg creates an embryo. Terms like "totipotent cell", "clump of embryonic cells", and "fertilized oocyte" are used by some to evade the issue or to make the issue seem too arcane for laypeople to understand. But the science is unavoidably clear: to clone successfully by somatic cell nuclear transfer is to create a new embryo. "Therapeutic" cloning i.e., cloning of a human embryo for research and medical purposes, always results in the destruction, which is to say the death, of a human person. To cause this death for any purpose would be immoral, as we know from the longstanding and widespread human and religious traditions, which have prohibited as immoral the direct taking of innocent human life -- Judeo-Christian tradition. As was confirmed by the horrible experience of the last bloody century, when regimes used their willing scientists and medical professionals to attempt to create a "superior race" or simply to solve the problems of some at the expense of others -genetic engineering involving the taking of innocent life in pursuit of "perfection" leads to destruction.

Even if the goals of scientific research are commendable in terms of health needs of our citizens, they cannot be pursued by evil means, including the death of the "least among us", the human embryo. In addition, to cause this death for so-called therapeutic reasons would violate the Hippocratic tradition of medicine which instructs a healer to

"first, do no harm". The harm to the embryo would be the greatest harm anyone can do to another person.

Even if the use of embryos for research purposes were not lethal, such a practice would fly in the face of the ethical and moral tradition of this country. Research on embryos produced through cloning, like research on any human embryos and fetuses, would constitute medical experimentation on human persons without their individual voluntary consent, and would violate the Nuremberg Code. This code, created following the trials of leading Nazis after World War II, is not a law or treaty obligation. But the Code is a fair summary of the civilized ethical standard of experimentation on living human beings.

It may appear that there is a big distinction between a Nazi medical experiment on an unwilling prisoner, on the one hand, and the pulling apart of what appears to be a small clump of tissue, on the other. But appearances deceive, and in this age of bioscience it is particularly important to be guided not by appearances but by underlying truth. *The truth is, the human embryo is a human being or person, temporarily unable to communicate and temporarily dependent on others.* Whether created by cloning or by the fertilization of an egg by a sperm, the resulting embryo is a new human being with its DNA, its genetic identity, in place, and the capability, if properly protected and nurtured over time, to become as independent as any one in this room. The protection and nurturing required is not extraordinary, but simply the normal development in a human

uterus, the same protection and nurturing that brought each one of us to first blink at the delivery room lights.

It would be illogical to state that the embryo's need for protection and nurturing is so great that its claim to humanity is forfeited. Each person requires protection and nurturing, to varying extents, at each stage of life. The only difference is degree. If we accord human status only to those who apparently do not in their current state require protection and nurturing, then the hospitals and nursing homes and airliners and coal mines are full of beings that are less than fully human. Of course, all of us instinctively reject such a definition: our Mom may be in a nursing home and extensively dependent on the care from other people, but she is still fully human. Similarly, the person at the earliest stage of life is also a human being, with all the rights pertaining thereto.

To view the embryo any other way, to limit and narrow our definition of personhood to a question of the person's present, perhaps momentary, independence, would be to institute a tyranny of the strong over the weak that would eventually be lethal to all of us. One might say, "but I'm strong and smart and independent, what do I have to fear from limiting human rights to people like me?". My response would be, we all start out weak, we end up weak, and we have unplanned moments of weakness throughout our lives. We therefore have a personal as well as a community interest in protecting life at all stages of development.

To permit human cloning, that is, the creation of that individual new human life, for the sole reason of ending that life in the interests of research or medical experimentation, is also deeply offensive to human dignity. The use of human embryos as spare parts sources and test beds not only kills a person, but it denigrates the dignity of being human by bringing a person into existence and then manipulating him or her for one's own purpose. It would denigrate the dignity of the persons involved in the killing and all those who would condone such killing. The cloning process turns a new human being into an object for lethal experiment, rather than a subject for love.

The advocates of so-called therapeutic cloning assert that the needs of those who meet their narrow and subjective definition of "the living" would benefit from experimentation on or treatment with tissue taken from human embryos. They raise very real and widespread cases of human suffering and need, ranging from diseases and injuries of the brain and nervous system to infertility, to justify the work they wish to undertake. No matter how noble the reason, however, the taking of an innocent human life is never justified. Fortunately, because of the continued success researchers are having with adult stem cells, there is even less basis for the insufficient but emotionally strong argument for lethal experimentation using human embryos. For example, in just the last thirty days we have read about some real breakthroughs:

 The April 2001 edition of <u>Tissue Engineering</u> described how researchers at the University of California at Los Angeles and the University of Pittsburgh isolated adult stem cells from human fat tissue to grow bone, cartilage, and muscle, as well as fat. Commenting on this breakthrough, Dr. Eric Olson, chair of the Department of Molecular Biology at the University of Texas Southwestern Medical Center in Dallas, was quoted by the <u>Washington Post</u> (April 10, 2001, p A1) as saying, "every other week there's another interesting finding of adult cells turning into neurons or blood cells or heart muscle cells. Apparently our traditional views need to be reevaluated."

- The same issue of <u>Tissue Engineering</u> described how Dr. Douglas Smith of the
 University of Pennsylvania Medical School has stretched nerve cells to become
 the connections, or axons, between nerve cells in an effort to bridge the gap that
 occurs in spinal cord injuries, so that communications can be restored in the spinal
 column.
- On April 18 scientists at Cambridge University in England announced that they
 had also made progress against spinal column injury. Scar tissue, which forms at
 the injury site, blocks nerve cell regeneration that would otherwise restore
 communications along the severed link. The British scientists found that injection
 of an enzyme, chondroitinase, breaks down the scar tissue and facilitates
 regeneration of the nerve cells.
- On April 11, the Anthrogenesis Corporation of Cedar Knolls, N.J., announced that it had developed a way to extract human stem cells from the placenta, and that the

cells were the equivalent of human embryonic stem cells (<u>The New York Times</u>, April 12, 2001).

There are other highly significant findings, such as the University of South Florida work, announced last August, in which adult stem cells from bone marrow grew into the brain cells appropriate to specific parts of the brain, or the research results announced last November by Dr. Fred Gage of the Salk Institute, demonstrating that adult stem cells taken from the spinal cords of rats can become neurons. In sum, research into the causes and rehabilitation of diseases and injuries of the brain and nervous system is producing spectacular results without the use of embryos, and there is every indication that the research results will continue to snowball. Although heavily funded and publicly touted by the scientists who are invested in it, research involving human embryos has had nowhere near the success that adult stem cells and other techniques have enjoyed. We don't need to kill human embryos, that is, human beings at the earliest days of their existence, in order to defeat these diseases and injuries. It is therefore especially appropriate that the cloning ban in the Brownback-Weldon bill would also prohibit cloning for so-called therapeutic purposes.

Human cloning is sometimes justified on the grounds that it is the last hope of those suffering from infertility, but the Culture of Life Foundation is aware of a completely natural and non-invasive infertility regimen which claims success rates of up to 80%. This regimen, called the Creighton Model System, was developed by Dr. Thomas Hilgers of the Pope Paul VI Institute of Omaha, Nebraska. I suggest the

Subcommittee contact him for additional information. His address, phone, and fax information is: 6901 Mercy Road, Omaha, NE 68106-2621. Phone (402) 390-6600, Fax (402)390-9851, Internet: www.popepaulvi.com

There are many other reasons why all human cloning should be banned, and I stress that these reasons are real, practical, not theoretical, and are based on universal truths.

First, human cloning changes the nature and meaning of human sexuality. If a new person can be produced by taking the nucleus of a somatic cell from a man and injecting it into the de-nucleated egg of a woman, then human sexuality becomes superfluous. From its age-old purpose of transforming human love into new life, sexuality in an age of cloning would become, even more than it has unfortunately already become, simply an itch to scratch. We have seen in the past half-century, as the connection between sexuality and reproduction has weakened in the "sexual revolution", a rise in negative social indicators such as divorces, abortions, an explosion of sexually transmitted diseases including one that is 100% fatal, and greatly increased exploitation of women in prostitution and pornography. By further weakening sexuality's reproductive purpose, cloning would therefore further weaken families and communities.

Second, human cloning would weaken or even pervert basic human relationships such as family, fatherhood and motherhood, consanguinity, and kinship. For example, if a clone resulted from the nucleus of a somatic cell taken from his "father", his biological tie to his "mother" would be vastly different than that of a natural child. Apart from

mitochondria DNA, which is outside the nucleus and is always passed on the maternal side, the clone would inherit no characteristics, no other DNA, no genetic material, from his mother. This very different biological tie could contribute to a different emotional mother-son tie as well. Further, as the clone would likely be "the spitten image" of his father, the mother's already different relationship with her child would become truly bizarre. Human cloning therefore perverts the relationships that are fundamental to our mental health and to the health of society.

Third, human cloning would compromise the dignity of the cloned person because she would forever know she was biologically identical to another person. Richard Seed, a scientist who wants to set up a cloning clinic in the U.S., has reportedly said that he wished he could have obtained a blood sample from Mother Teresa from which to clone a saint. Of course, the resulting little girl would only be biologically identical to Mother Teresa. The unique life-principle or soul would make her an entirely unique human person. Her own environment and experiences also contribute to her uniqueness. There will never be "another Mother Teresa". But the expectations that others would put on that child, and the expectations she might place on herself, would possibly make for a miserable life. She would have lost the essential human freedom to be oneself. The children of the famous and notorious sometimes carry a heavy burden, but at least they retain the freedom of their own individuality. The cloned person would have lost that basic freedom because of the decision of another person.

The threat of power over others is a fourth reason to oppose human cloning. Most parents consciously choose to have children, and some try to influence the development of their child *in utero*. All responsible parents exercise authority over their children after birth and use their authority to educate and develop their children. This use of parental authority is natural. But human cloning gives a person absolute dominion over the existence of another. Whether the person comes into existence at all, when the person comes into existence, what the person's genetic material will be, what the person's intelligence and appearance and special skills will be -- all this would be determined by another person. As I noted earlier, if people can have this kind of power over others, than the equality clause is just empty words from a quaint past. Those who would clone people seek a dominion over others which can only be termed "Godlike". Like the bypassing of human sexuality to achieve reproduction, the calling into existence of a precisely specified new person is an exercise in apparent human omnipotence.

A fifth reason to oppose human cloning is that it will increase a trend which we need to reverse, if we want to retain our freedom: the trend toward evaluating other people on the basis of their qualities instead of on their existence. Human cloning will always be the outcome of a choice about the specific traits and qualities of a child. As we have seen, cloning turns human reproduction into a manufacturing process. In time, given our national genius at capitalism, particular qualities and the raw material needed to obtain them will be available in exchange for money. Health insurers, for example, have a financial incentive to favor healthier children. Wealthy parents will use cloning to get ever-higher "quality" children ("quality" meaning whatever the fashion of the time

dictates) while poor people, reproducing in the traditional way, would possibly lag ever farther behind. Again, the strain imposed on our concept of equality will be too much, and self-government will end.

I said earlier that human cloning would be an exercise in apparent human omnipotence. I say "apparent" because, unlike the natural reproductive system, which has brought us to this point, cloning is fraught with physical risks. Many of those risks have already been displayed in the cloning of mammals. For example, Dolly the cloned sheep was the one live birth derived from 277 sheep embryos that were created in the experiment. Cloned embryos appear to develop into larger-than-normal fetuses, resulting in a high incidence of stillbirths and Caesarean section deliveries. Developmental problems associated with abnormal size of human clones would include a high incidence of death in the first few weeks from heart and circulatory problems, diabetes, underdeveloped lungs, or immune system problems. The January death from a common infection of a cloned wild gaur (an endangered South Asian species) at Trans-Ova Genetics in Sioux Center, Iowa, may indicate that cloned animals have a lower resistance to disease. Another problem is the potential for clones to have aging DNA and thus an accelerated aging process. Lord Robert Winston, one of the developers of in vitro fertilization, has stated that because of the faster aging process, he would not want a child of his to be cloned.

The current low rate of cloning success with mammals (two clones born per 100 implantations, according to one source, up to 17 per 100 according to another) suggests a similarly low success rate for human cloning. And even if a seemingly normal and

healthy animal is born, a defect that was not apparent can suddenly cause death, as was the case with a cloned sheep born last December at the same center that produced Dolly. The March 25, 2001, New York Times, reporting on the cloning of animals, described a high rate of spontaneous abortion and post-natal developmental delays, heart defects, lung problems, and malfunctioning immune systems among cloned animals who had initially seemed normal. But let us stipulate that human ingenuity will gradually increase the success rate: who could live with having caused the pain of the many human clones who suffered and died along the way?

One section of the Brownback-Weldon bill is unneeded, in my view, and that is the section creating a commission to study the issues surrounding human cloning. There is no question that human cloning is profoundly wrong, regardless of the purpose for which it is undertaken. Every act of human cloning would be somewhere between cruel and lethal. It is a good example of science gone wild, without any guidance by ethics or morals. We recall from the twentieth century where science unfettered by ethics or morals can take us. We know cloning should not be done, and a commission is not needed to confirm what we already know. Morality and ethics are not the proper fields of government-created commissions. That said, the Culture of Life Foundation wholehearted supports the rest of the bill and appreciates the concern that this subcommittee has for the health and well-being of all Americans, at all stages of their lives.